

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number  
**WO 03/106381 A2**

(51) International Patent Classification<sup>7</sup>: **C07C**

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(21) International Application Number: PCT/US03/18262

(22) International Filing Date: 11 June 2003 (11.06.2003)

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(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/388,326 12 June 2002 (12.06.2002) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

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(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *without international search report and to be republished  
upon receipt of that report*

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: HUMAN ADAM-10 INHIBITORS

(57) Abstract: The present invention provides compounds useful for inhibiting the ADAM-10 protein, with selectivity versus MMP-1. Such compounds are useful in the *in vitro* study of the role of ADAM-10 (and its inhibition) in biological processes. The present invention also comprises pharmaceutical compositions comprising one or more ADAM-10 inhibitors according to the invention in combination with a pharmaceutically acceptable carrier. Such compositions are useful for the treatment of cancer, arthritis, and diseases related to angiogenesis. Correspondingly, the invention also comprises methods of treating forms of cancer, arthritis, and diseases related to angiogenesis in which ADAM-10 plays a critical role.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18262

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 31/495, 31/496, 31/5377; C07D 241/04, 401/06, 401/12, 403/06, 403/12, 413/06, 413/12.  
US CL : 514/235.8, 252.11, 253.01, 253.05, 253.13, 254.01, 255.01; 544/121,357,360, 365, 372, 383.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 514/235.8, 252.11, 253.01, 253.05, 253.13, 254.01, 255.01; 544/121,357,360, 365, 372, 383.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
CAS ONLINE STRUCTURE SEARCH AND CASREACT SEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,753,653 A (BENDER et al.) 19 May 1998 (19.05.1998), see especially columns 4-6, 8 and 12 and examples 1-9 in columns 25-35.	1-3,6-9,11-13,15,16,51-53 and
X	US 6,333,324 B1 (NEYA et al.) 25 December 2001 (25.12.2001), see especially columns 1-3, 7 and examples 19,25,27-30 in columns 32,37,38.	1-3,10-12,15-16,29-33,51-53
A,E	US 6,664,291 B2 16 December 2003 (16.12.2003), see column 38, lines 5-12.	54-63

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

17 January 2004 (17.01.2004)

Date of mailing of the international search report

27 FEB 2004

Name and mailing address of the ISA/US

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Commissioner for Patents  
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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18262

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claim Nos.: 1-13, 15-27, 29-33, 35-40, 51-53, and 64-66 (all in part)  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
Please See Continuation Sheet
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐  
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

PCT/US03/18262

## Continuation of Box I Reason 2:

The claims relate to an extremely large number of permutations based on the scope of variables claimed as generically set forth in the claims which are not all adequately supported in the description within the meaning of PCT Article 6. The claims have been searched based on the U.S. classification of the working examples in the description and particularly claimed in claims 14, 28, 34, 41, 54-63 and 67-69.

It has been noted that there are no claims numbered 42-50. On page 90 after claim 41 follows claim 51, etc.